made in considerable quantities in Bartow, Floyd, and Polk counties to supply the iron furnaces in the vicinity doubtless comes from this species, but in Haralson and Carroll Counties the only evidence I saw of its being used in any way was a few logs at a small sawmill in Bremen. It is probably not abundant enough in these highlands to make its exploitation profitable at present in competition with the much greater supply in the coastal plain. A great deal of it was doubtless destroyed in clearing the land for agricultural purposes before its timber was as much in demand as it is now.

College Point, Neil York.

## TERMS APPLIED TO THE SURFACE AND SURFACE APPENDAGES OF FUNGI

By William A. Murrill.<br>Glossary of Terms

Abrupt, terminating suddenly.
Aculeate, having prickles.
Aculeolute, having small or few prickles.
Alveolate, deeply pitted like a honeycomb.
Anastomosing, forming a net-work.
Annulate, marked with rings or circular transverse lines.
Anoderm, without a crust or skin.
Appendiculate, decorated with small fragments of the veil; used of the margin.
Applanate, flattened out horizontally.
Appressed, lying close.
Arachnoid, cobweblby; of slender entangled hairs, which are fewer and longer than in tomentose. Used chiefly of the veil.
Areolate, marked out into small spaces; reticulate.
Asperate, rough with short stiff hairs or prints.
Barbed, bearded, having stiff hairs.
Barbwiate, finely bearded.
Bibulons, alsorbing moisture.
Bifurcute, forked.

Bossed, umbonate.
Bristly, clothed with stiff short hairs.
Bullate, blistered or puckered.
By'ssaccous, byssoid.
Byssoid, filamentous, cobwebby, as in the my celium. Used chiefly of the margin.
Callose, having hardened spots or warts.
Calious, baid ; destitute of hairs usually present.
Canaliculate, deeply channeled; used chiefly of the stem.
Cancsccnt, gray or whitish from a coating of fine hairs.
Carbonacious, black and brittle like coal or charcoal.
Carnose, fleshy; soft, but firm.
Cartilaginous, firm and tough like cartilage.
Ceracous, wax-like.
Chally, covered with thin dry scales.
Channeled, having deep longitudinal furrows.
Chartaceous, with the texture of parchment or writing paper.
Ciliate, fringed with hairs or bristles.

Circinate, arranged in a circle.
Cirrhese, tipped with a wavy thread-like appendage.
Clathrate, latticed.
Colliulose, covered with hillock-like elevations.
Comosi, bearing a tuft of hairs.
Compressed, flattened laterally; used chiefly of the stem.
Concaire, incurved.
Concentric, having a common center.
Confereoid, consisting of loose filaments.
Confluent, running together, blended into one.
Contorted, iwisted, crooked.
Conzer, arched.
Corinceous, of a leathery texture.
Corky, firm and elastic like cork.
Corneous, of a homy texture.
Corrugrated, irregularly crumpled in folds or wrinkles.
Cortex, the rind or bark; a substantial outer layer.
Corticate, having a rind or cortex.
Costate, having one or more prominent ribs or veins.
Crenate, furnished with rounded teeth.
Crenulute, minutely crenate.
Cribrate, cribrose.
Cribruse, porose, perforated.
Crustaceous, forming a closely adhering crust or layer.
Dealbate, covered with a very white bloom or powder, as though whitewashed.
Dentate, bearing broad sharp teeth pointing directly outward.
Denticulate, minutely dentate.
Depressed, somewhat sunken at the center.
Determinate, having a distinct outline; used of the margin.
Diaphanous, nearly or quite transparent.
Diffuse, spreading widely, loosely or irregularly; used chiefly of the margin.
Disc, the central portion of the surface of the pileus.

Derwny, having a dense covering of sloort weak hairs.
Dissented, cut deeply intu many divisions.
Fichinale, furnished with stiff bristles.
Echinulute, minutely spinose; useed chiefly of the suriace of spores.
Iffuse, loosely spreading.
Efflused, effuse.
Elastic, returning to its original piosition when pressed or bent.
Encrusted, covered with a hard skin or crust.
Entire, destitute of teeth or notches.
Erose, having the edge ragged as though tom or bitten.
Eroded, erose.
Evanescent, disappearing at a very early stage.
Eiven, without elevations or depressions.
Exasperate, covered with short hard points.
Expanded, spread out.
Explanate, spread or flattened out instead of rolled or folded as usual.
Farinose, covered with a white mealy powder.
Fascinted, marked with broad parallel stripes.
Fascicled, growing in close bundles or clusters.
Farose, honey-combed.
Fïbrillose, bearing firm loose fibers or threa's.
Fibrous, composed entirely or mostly of separable threads.
Fïlamentous, slender and thread-like.
Fïmbriate, fringed with loose slender processes larger than hairs.
Fimbtrillate, minutely fringed.
Fïssile, capable of being split or divided.
Flaccid, relaxed, wilted, not able to hold up its own weight.
Fleshy, sofi, but firm, as in a potato. Neither gelatinous nor cartilaginous.
Flexuose, zigzag, winding.
Floccose, clothed with locks or tufts of soft woolly hairs.
Flocculent, Hoccose.

Flocculose, minutely floccose.
Foveate, marked with pits or depressions. Foveolate, marked with small pits or depressions.
Fugacious, fading or falling away in a very short time.
Furfuracious, covered with soft branlike scales or scurf.
Gibhous, protuberant or swollen at some definite part.
Glabrate, nearly glabrous, or becoming glabrous.
Glabrescent, slightly glabrous.
Glabrous, free from hair, scales, warts or other appendages; not necessarily smooth or even, but usually so.
Glair, a byaline viscid substance like the white of an egg.
Glaucous, covered with a whitish bloom.
Glutinous, sticky to the touch.
Granulur, composed of or covered with minute grains.
Grooved, somewhat furrowed lengthwise; used chiefly of the stem.
Guttate, discolored with small dots.
Guttulate, apparently sprinkled with small drops of oil or resin.
Gyrate, folded like the surface of the brain, convoluted.
Gyrose, gyrate.
Hirsute, clothed with rather long hairs, coarser than in pubescent and not so stiff and crect as in hispid.
Jirtellous, slightly hirsute.
Mispid, beset with erect stiff hairs or bristles, either long or short.
JJispidulous, minutely hispid.
Honry, grayish-white on account of a fine coating of hairs.
Ifyalescent, somewhat hyaline.
/Iy'uline, transparent or translucent.
II'g rometric, readily absorbing and holding moisture.
/Jysrophanous, apparently water-soaked; translucent when wet, oparjue when dry.
fimbricate, overlapping like the shingles on a roof.

Imbricated, imbricate.
Immarginate, without adistinct edge or border.
Incanescont, somewhat hoary.
Incanous, hoary.
Incised, deeply cut into irregular projecting parts.
Indeterminate, diffuse; used chiefly of the margin.
Inturated, hardened.
Innate, blending with the substance.
Intumescent, swelling up, becoming tumid.
Inzolute, rolled tightly inward or downward upon itself; the opposite of rezolute. 3
Labyrinthine, marked with intricate sinuous lines or grooves.
Laccate, apparently varnished.
Lacerate, divided into irregular segments, as if torn.
Laciniate, deeply cut or slashed into narrow segments, which are larger and more irregular than in fimbriate.
Lacinulate, finely laciniate.
Lacinulose, lacinulate.
Lacunose, pitted with shallow holes, which are larger and less regular than in alveolate.
Lanate, woolly.
Latticed, interlacing, with spaces between.
Lax, loose, flaccid.
Ligneous, woody.
Looate, deeply divided into rounded parts with broad sinuses.
Lobed, lobate.
Lobulate, having small lobes.
Luciul, transparent.
Maculatc, spotted.
Maculose, maculate.
Marbled, faintly and irregularly striped or veined.
Jembranaceous, membranous.
Membranous, thin, soft and often translucent.
Mcrismoid, subdivided into small pilei.
Micaccous, covered with glistening particles.

Ilucedinous, mould-like.
1/uciluginues, slimy.
Multifid, deeply cleft into many segments.
Maricate, rough with short hard points.
Naked, destitute of the covering usually present.
Nebulose, clouded.
Nodulose, covered with pimples or knots.
Obsolete, suppressed or scarcely apparent.
Obluse, rounded, blunt.
Opaque, having a dull appearance;
neither transparent nor shining.
Osseous, of a bony texture.
Pallescent, somewhat pale.
Pallid, lacking in color; of an indistinct watery or dirty-white color.
Papillate, having minute soft tubercles like those on the tongue.
Papillose, papillate.
Prapyraceous, papery.
Patent, spreading; used of the margin.
Pectinate, divided into narrow comb-like teeth.
Pellicle, a thin distinct outer layer or skin; not thick and hard like a crust.
Pelliculose, covered with a pellicle.
Pellucid, translucent.
Penicillate, bordered with fine hairs like those of a camel's-hair brush.
Peridium, the outer layer or covering of a closed fungus fruit-body, like a puffball.
Persistent, firmly attached and lasting.

- Piliferous, pilose.

Pilose, bearing long soft hairs, more or less erect and separate.
P'itted, marked with small depressions.
Plane, flat.
Micatc, folded lengthwise, as in a fan.
Plicatulate, minutely plicate.
Polished, smooth and shiny.
Porose, pierced with many small, rounded openings.
Premorse, appearing as if bitten off.
Proliferous, producing offshoots.
Pruinose, covered with a whitish powdery bloom as if frosted.

I'uberulent, minutely pubescent ; having a few shert soft hairs.
I'ubescent, covered with short soft downy hairs.
Putveraceous, pulverulent.
P'ulverulent, dusty or powdery.
I'unctate, having transparent or colored points or dots.
Pustulate, having pimples or blisters, usually somewhat larger than in papil. late.
Radiant, radiating.
Radiate, radiating.
Radiating, spreading from a conmmon center.
Ramose, bearing branches, usually many in number.
Recurved, bent backward ninety degrees or less.
l'eflected, reflexed.
Reflexed, bent back ward more than ninety degrees or, if less, bent more abruptly than in recurved.
Repand, wavy; used chiefly of the margin.
Resupinate, reversed, inverted.
Reticulate, marked like a net with meshed fibers.
Revolute, strongly curved or rolled backward or upward; opposite of invelutc.
Risescent, nearly rigid.
Rigid, firm, stiff, unyielding.
Rimose, marked with numerous clefts or cracks.
Rimulose, minutely rimose.
Rivulose, marked with fine wavy channels or grooves.
Rotund, rounded.
Rugose, wrinkled.
R'usulose, minutely wrinkled.
Satiny, glossy like satin.
Scabrate, scabrous.
Scabrid, slightly scabrous.
Scabridous, somewhat scabrid.
Scabrous, rough with minute hard points or short stiff hairs.
Scaly, covered with scales, which are usually fibrous.

Siariose, scarious.
Scarious, dry and membranous.
Scrobiculate, deeply and irregularly pitted.
Sebaceous, wax-like.
Sericous, silky ; covered with fine straight glossy liairs.
Serrate, having sharp teeth pointing forward as in a circular saw.
Serrulate, finely serrate.
Selaceous, setose.
Setigerous, setose.
Setose, beset with bristles.
Setulose, beset with fine bristles.
Shaggy, villose or hirsute.
Silky, covered with close-pressed soft and straight pubescence.
Sinuate, strongly waved; used chiefly of the margin.
Sinuous, curving to the right and left.
Smooth, even, without inequalities. Not necessarily glabrous.
Soft, tender and yielding to the touch.
Spinose, spine-like or having spines.
Squamose, covered with coarse scales.
Squamulose, covered with minute scales.
Squarrose, rough with projecting scales.
Spuarrulose, minutely squarrose.
Striate, marked length wise with fine lines or ridges.
Striatulate, minutely striate.
Strigose, covered with small bristles.
Strumose, swollen on one side.
Stupose, covered with matted tow-like hairs.
Sub-, a prefix meaning under, benealh, somewhat, or partially.
Suberose, corky.
Subulate, awl-shaped.
Sulcate, marked with one or more conspictious grooves or furrows.
Tessellate, checkered ; marked with little squares like those on a checkerboard.

Tessellated, tessellate.
Tomentose, covered with densely matted woolly hairs.
Tomentous, tomentose.
Tomentulose, minutely tomentose.
Tomentum, matted woolly hairs.
Tortuous, turning in various directions.
Tiemelloid, gelatinous.
Truncate, abrupt, as though cut off; used chiefly of the margin.
Tuberculose, covered with small irregular pimples.
Tumid, swollen.
Tunicate, covered with a thin separable coat.
Umbilicate, having a small abrupt central depression.
Uimbonate, having a ratber prominent rounded elevation in the center.
Umbonulate, subumbonate.
Unctuous, having an oily or greasy appearance.
Uindulate, waved or uneven near the margin.
Telutinous, velvcty.
lelvety, closely and evenly covered with fine erect hairs.
Vernicose, varnished.
Verucose, covered with wart-like elevations.
Vervuculose, minutely verruculose.
Villose, covered with long, weak, nearly straight hairs, which are softer and denser than in pilose.
Virgate, streaked.
liscid, sticky, glutinous.
l'itreous, lyyaline, transparent like glass.
Vittate, longitudinally striped or ridged.
Woolly, clothed with long twisted or matted hairs.
Wrinkiled, contracted and crumpled.
Zonate, marked with concentric lines or bands of color.
Zoned, zonate.

## Synorsis of Terms*

A. General terms applied to the Surface as a whole.

1. Relating to form.
2. Relating to texturc.
3. Relating to color due to texture.
B. Terms applied to the Margin in paticular.
C. Surface Markings.
I. Rounded markings.
a. Dots.
b. Depressions.
c. Elevations.
4. Elongated markings.
a. Irregular.
b. Regular.
1). Surface Coverings.
r. Mucilage.
5. I'owder.
6. Scales.
7. Hairs.
a. Kinds of hairs.
b. Fine hairs.
c. Coarse hairs.
d. Stiff hairs.
8. Sharp elevations.
A. General. Terms Applied to the Surface as a Whole
r. Relating to form:
applanate, plane, glabrous, smooth, eiren, depressed, concave, expanded, explanate, contorted, convex, compressed, resupinate, crustaceous.
9. Relating to texture :
mucedinous, confervoid, fibrous, gelatinous, tremelloid, soft, waxy, seluceous, ceraceons, fleshy, carnose, membranous, membranaceous, spongy, bibulous, hygrometric, scariose, scarious, papery, papyractous, chartaceous, crustaceous, carbonaceous, cartilaginous, leathery, coriaceous, corky, subcrose, woody, ligneous, indurated, bony, osscous, horny, comeous, ugescent, rigid, elastic; anoderm, tunicate, pelliculose, corticate, encrusted, pellicle, cortex, peridium.
10. Relating to color due to texture :
opaque, pallid, pallesicnt, hygrophanous, polished, unctuous, translucent, hpaliscent, pellucid, hyaline, diaphanous, Incid, transparent, vitreous.

## B. Termis Appifed to the Margin in Partictlar

immarginate, truncate, abrupt, obtuse, rotund, tumid, acute, patent, recurved, reflexed, reflectid, revolute, involute; undulate, striatulate, striate; entire, repand, sinuate, determisate, diffuse, effuse, indeterminate, byssoid, byssacious. penicillate, ciliate, fimbrillate, fimbriate, lacinulate, lacimulose, laciniate, pectinate, cirrlose, appendiculate ; serrulate, serrate, denticulate, dentate, crenulate, crenate, erose.

* Words in italic are strictly or practically synonymons with those immediately preceding them.
eroded, premorse, lacerate, fissile, lobulate, lobed, lobate, incised, dissected, multifid, proliferous, merismoid.


## C. Surface Markings

1, Rounded Markings.
a. Dots:
punctate, guttulate, guttate, maculate, maculose.
b. Depressions:
umbilicate, pitted, fovente, foveolate, alveolate, favose, lacunose, scrobiculate, porose, cribrose, latticed, clathrate.
c. Elevations:
papillate, papillose, pustulate, tuberculose, verruculose, verrucose, nodulose, colliculose, callose, bullate, intumescent, tumid, gibbous, strumose, subumbonate, umbonulate, umbonate, bossed.
2. Elongated Markings.
a. Irregular:
sinuous, flexuose, tortuous.
nebulose, marbled, rivulose, rugulose, rugose, wrinkleá, labyrinthine, corrugated; rimulose, rimose.
b. Regular:
confluent, anastomosing, radiating, radiant, radiate, concentric, circinate; reticulate, areolate, tessellate, tessellated; plicatulate, plicate, virgate, vittate, costate; grooved, channeled, canaliculate; annulate, zonate, soned, fasciated, sulcate, gyrose, gyrate.

## D. Surface Coverings

1. Mucilage:
viscid, glutinous, glairy, slimy, mucilayinous, varnished, zernicose, laccate.
2. Powder:
pruinose, glaucous, dealbate, farinose, pulverulent, pulveraceous, granular.
3. Scales:
furfuraceous, chaffy, micaceous, squamulose, squamose, scaly, imbricate, imbricated, squarrulose, squarrose.
4. Hairs.
a. Kinds of hairs :
obsolete, evanescent, fugacious, persistent, appressed, innate, filamentous, arachnoid, flaccid, lax, fascicled, ramose.
b. Fine hairs :
glabrate, glabrescent, naked, calious, hoary, canescont, incanous, incanescent, satıny, silky, sericeous, puberulent, pubescent, dozuny, velvety, vclufinurus.
c. Coarse hairs:
fibrillose, villose, pilose, piliferous, tomentose, tomentous, hirtellous, hirsute, shaggy, stupose, woolly, lanate, flocculose, floccose, focculent, comose.
d. Stiff hairs:
hispidulous, setulose, barbulate, strigose, bearded, barbed, setose, setigerous, selaceous, bristly, hispid, echinate.
5. Sharp clevations:
scabridous, scubrid, scalbous, scabratc, asperate, exasperate, muricate, aculeolate, aculeate, spinose.
Nel York Botanical Garden.
